

What is claimed is:

1. A sample retainer for X-ray fluorescence analysis for use in pretreating a liquid sample and then in X-ray fluorescence analysis of contents of such liquid sample, which retainer comprises

5 a ring-shaped pedestal;

a hydrophobic film of a thickness smaller than 10  $\mu\text{m}$  and having a peripheral portion held by the pedestal and also having a transmitting portion for passage of X-rays therethrough; and

10 a sheet-like liquid absorbent element applied to the transmitting portion of the hydrophobic film and having a thickness within the range of 1 to 100  $\mu\text{m}$ ;

wherein a liquid sample is adapted to be dispensed dropwise onto and dried on the liquid absorbent element with contents of the liquid sample consequently retained thereon.

15 2. The sample retainer for X-ray fluorescence analysis as claimed in Claim 1;

wherein the hydrophobic film is made of a material selected from the group consisting of polyester, polypropylene and polyimide; and

20 wherein the liquid absorption element is made of paper.

3. The sample retainer for X-ray fluorescence analysis as claimed in Claim 2;

wherein the liquid absorption element is made of paper containing a porous powder.

25 4. An X-ray fluorescence analyzing method utilizing the sample retainer for X-ray fluorescence analysis as defined in Claim 1, which method comprises:

causing a liquid sample to be dispensed dropwise onto and dried on a liquid absorption element with contents of the liquid sample

consequently retained thereon;

irradiating an area of the liquid absorption element with primary X-rays, to thereby measure an intensity of secondary X-rays generated.

- 5 5. An X-ray fluorescence spectrometer utilizing the sample retainer for the X-ray fluorescence analysis as defined in Claim 1, which spectrometer comprises:

a source of X-rays for irradiating an area of a liquid absorption element, where a liquid sample is dispensed dropwise onto and dried  
10 on the liquid absorption element with contents of the liquid sample consequently retained thereon; and

a detecting device for measuring the intensity of the secondary X-rays emitted from that area of the liquid absorption element.